Two point predictor corrector block method for solving delay differential equations

ABSTRACT

A 2-point variable order variable stepsize block method for the numerical solution of delay differential equations is described. The predictor-corrector formulae using divided difference formulation are implemented to produce two points simultaneously. This algorithm proves to be reliable, accurate and efficient. Furthermore,numerical experiments show that the block method reduces the number of total steps when compared with 1-point sequential method.

Keyword: Delay differential equations; Variable order; Variable stepsize; Block method